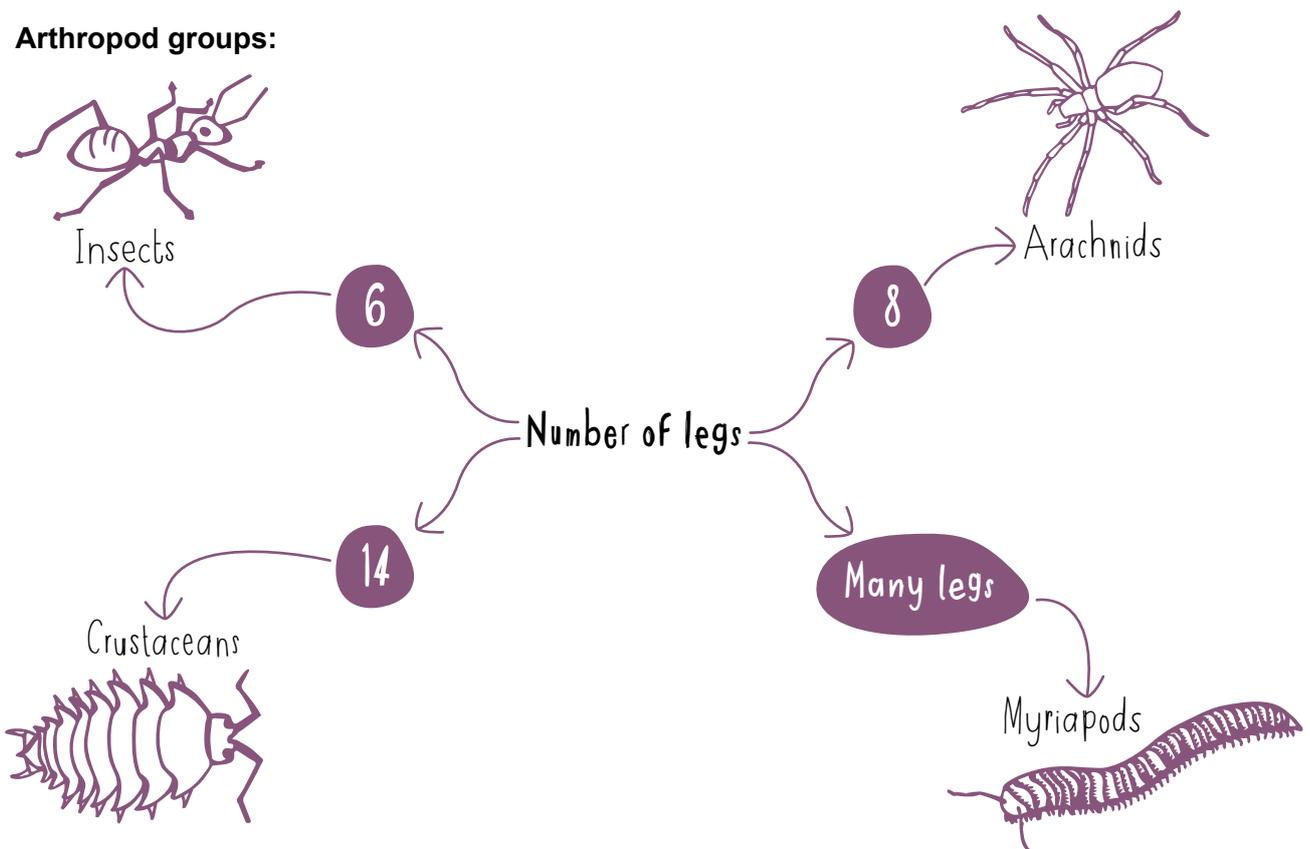


INVERTEBRATE IDENTIFICATION

We can organise living things based on their characteristics. Invertebrates are animals without a backbone. Around 97% of all animals on the planet are invertebrates.

An interesting phylum of invertebrates are the **arthropods**, which usually have a hard exoskeleton, jointed legs and a segmented body. We can divide arthropods in to further **groups** depending on how many legs they have!

Arthropod groups:



There's an extinct subphylum of arthropods known as Trilobites. Trilobites first appeared around 540 million years ago! Many trilobites would curl up in to little balls for protection.

Other invertebrate groups:

Other invertebrate groups include **Annelids** (segmented worms such as the common earthworm) and **Molluscs** (which have a broad muscular foot and may have a hard shell, Snails are types of molluscs).

Activity:

Which group do I belong to and why?



Butterfly



Slug

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INVERTEBRATE SPOTTER SHEET

Which of these invertebrates can you find? Record how many of each (using a tally) and see if you can work out which invertebrate group they belong to. Are they arthropods, molluscs or annelids?

Earth worm

How many:

What group does it belong to?



Beetle

How many:

What group does it belong to?



Ant

How many:

What group does it belong to?



Snail

How many:

What group does it belong to?



Slug

How many:

What group does it belong to?



Woodlouse

How many:

What group does it belong to?



Shieldbug

How many:

What group does it belong to?



Centipede

How many:

What group does it belong to?



Spider

How many:

What group does it belong to?



Millipede

How many:

What group does it belong to?



Aphid

How many:

What group does it belong to?



What did you see? Draw it here:

Did you know... that in the UK alone there are over **4,000** species of beetle?

Don't forget... to record what you find at chesterzoo.org/connections

SPOT THE FLYING INVERTEBRATES

Buzzing or fluttering there are lots of flying invertebrates but did you realise that they all belong to just one of the groups that we have looked at? The **insects**. (It is worth noting that not all insects have wings and can fly though!) Insects are the most diverse group of organisms so let's find out a little more...

Hymenoptera – Bees, wasps and ants (Usually 2 pairs of wings (although can appear as 1) antenna, biting mouthparts)

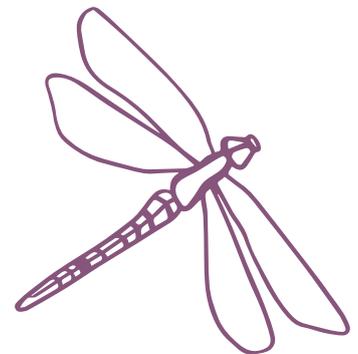
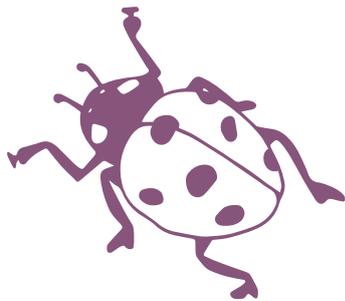
Coleoptera – Beetles (2 pairs of wings usually the forewings consist of hard shells to protect the hindwing)

Lepidoptera – Butterflies and moths (Most feed with a proboscis, wings covered in scales)

Odonata - Dragonflies and damselflies (large heads with large compound eyes, long slender abdomens, small antenna, 2 pairs of similarly sized wings with dark marks at the tips)

Diptera – Flies (One pair of wings, Hind wings modified for balance, large compound eyes)

Neuroptera – Lacewings, antlions and Mantidflies (2 pairs of membranous, long segmented antennae, strong mandibles they are predators)



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FLYING INVERTEBRATE SPOTTER SHEET

Which of these flying invertebrates can you find?

Bumble bee

How many:

What group does it belong to?



Honey bee

How many:

What group does it belong to?



Wasp

How many:

What group does it belong to?



Hoverfly

How many:

What group does it belong to?



Butterfly

How many:

What group does it belong to?



Dragonfly

How many:

What group does it belong to?



Damselfly

How many:

What group does it belong to?



Ladybird

How many:

What group does it belong to?



Crane fly

How many:

What group does it belong to?



Moth

How many:

What group does it belong to?



Lacewing

How many:

What group does it belong to?



What did you see? Draw it here:

Did you know... we have 59 species of butterfly in the UK!

Don't forget... to record what you find at chesterzoo.org/connections